

## COMMENTS OF QUEENSTAKE RESOURCES

**RE: RIN: 1219-AB29,**

### **September 7, 2005 Notice of Proposed Rulemaking to Amend MSHA's Rules for Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners**

Set forth below are the comments of Queenstake Resources ("Queenstake") on MSHA's Notice of Proposed Rulemaking ("NPR") to amend the Agency's rules for diesel particulate matter exposure of underground miners published in the Federal Register of September 7, 2005. 70 Fed. Reg. 55018. RIN: 1219—AB29. Queenstake operates the Jerritt Canyon gold mining complex outside of Elko, Nevada. We appreciate this opportunity to comment on the September 7 NPR. Queenstake is continuously striving to keep the working environment of our workers safe. Queenstake is a member of the National Mining Association and the Nevada Mining Association. As such, Queenstake endorses the comments of both of these organizations on this NPR, and hereby incorporates them by reference as though fully set forth.

As a general comment, Queenstake does not believe the final limit of 160 micrograms of total carbon per cubic meter of air is either technologically feasible or based on sound science. We are so concerned about our ability to comply with the final limit that Queenstake is an individually named party in the mining industry's litigation challenging the DPM Rules. Having said that, however, Queenstake has been working toward the goal of achieving the final limit. Indeed, we are an active participant in the NIOSH-Industry-Labor Diesel Partnership, and we are currently working with NIOSH at our complex on a Partnership study.

We now turn to Queenstake's specific comments on the NPR and respond to some of the questions posed by MSHA in the NPR's preamble.

**I. Technological Feasibility**

**B. Alternative Fuel Distribution Systems**

B20 Biodiesel is available in Salt Lake City, approximately 300 miles away. All fuel storage at the Jerritt Canyon mines is above ground, at elevations of about 7400', with an average temperature for the first calendar quarter of 2005 of about 25 F. Low temperatures can often reach -25 F. The challenge we face is both getting the bio delivered, and stored at these temperatures. We plan to test and evaluate these questions during the Diesel Partnership study at the Jerritt Canyon SSX Mine over the next several months.

**C. Remaining Technological Feasibility Issues**

Technology is available that allows us to generally be in compliance with the current limit of 308 EC. We do not believe the technology will be available or feasible for our mines to be in compliance with a 50 ug reduction each year, as is proposed in the NPR.

Current technology for reducing DPM tailpipe emissions consists mainly of alternative fuels and diesel particulate filters used on exhaust.

As noted above, alternative fuels have not been tested yet at Queenstake since they are not locally available.

We are experimenting with several diesel particulate filters ("DPFs"), however, we are concerned that DPFs can be detrimental to engine life and performance due to increased exhaust back-pressure (especially at the high altitudes in which we operate). Diesel particulate filters also have been known to increase miners' exposure to nitrogen dioxide (NO<sub>2</sub>) as stated in [PROGRAM INFORMATION BULLETIN NO. P02-4.](#)

MSHA is also requesting information concerning employees who will be required to wear respirators due to inability to comply with the the final limit. At Jerritt Canyon, the final limit of 160TC ug/m<sup>3</sup> will force approximately 100 Queenstake employees to wear a respirator for their entire shift. Wearing respirators poses additional health concerns as well as comfort issues for miners. Those concerns include additional body stress and difficulty in communications.

### **Implementation of Available DPF's**

We have tried four Engelhard passive filters and two ECS active filters. With the passive filters installed, engine backpressure quickly rose to the manufacturer's maximum recommended limit – many times within 50 hours of use. The filters failed to regenerate due to inadequate exhaust temperatures and often had to be removed to be cleaned. One of the filters has been breached but is still in service, one has been discarded, and one is still in service but must be manually cleaned. The fourth filter was accidentally submerged in water during use, thus it has been cleaned and put back into service to see if cleaning efforts have been successful. Tests have not yet been finished to see if the filter is still usable.

We have also tried a disposable diesel exhaust filter (DDEF) from Filter Service and Testing on a Kubota tractor. The first filter lasted only 4-days before it melted and caught fire. We currently have 11-hours on the second filter and it is close to the manufacturer's recommended backpressure.

### **Operator's Limited Access to Alternative Fuels and Ultra Low Sulfur Fuel**

There are no indications that ultra low sulfur fuel, (below 10 PPM) will have more than a negligible impact on our DPM levels. Since it is not readily available from our fuel suppliers, we have not pursued this option further.

## **Installation of Environmental Cabs**

We have installed five fully enclosed cabs on haul trucks and loaders. The cabs have lowered the DPM exposures of the operators of these vehicle to below the final limit. Cabs have been designed, manufactured and installed on-sight, but still cost between \$30,000 & \$50,000 per machine. In order to install our custom designed and manufactured cabs, we have to start from the frame up. Economically, this has to done during a major rebuild. Utilizing the full capacity of our rebuild shop, the installation of cabs on our remaining haul truck and loader fleet will occur over the next three years, or the end of 2008. This does not address cabs on jumbo drills and roof bolters. We have yet to find or develop a design that will work on all of our drills.

## **II. Complexity of Developing an Appropriate Conversion Factor for the Final Concentration Limit**

A review of our DPM sampling results indicates no single conversion number from total to elemental Carbon is appropriate. To overcome the discrepancy that will result when a sample would have been in compliance with the total carbon equivalent sample level, but not the converted elemental level, we suggest the following two alternatives. When a lab runs the NIOSH 5040 method test, the results are produced as organic, elemental, and total carbon. We recommend that the indicated elemental carbon number from the lab evaluation be used as the EC number. As an alternative, similar to the method used by the Agency in 2004, when a sample result exceeds the total equivalent of the applicable limit or PEL, apply the accepted conversion factor. If neither number was higher than the applicable DPM limit, no violation of the standard would have occurred.

### **III. Economic Feasibility**

Since we have not determined if technology is available to comply with the final PEL, it is impossible to estimate what the cost of compliance may ultimately be.

### **IV. Section-by-Section Discussion of the Proposed Rule**

#### **A. Section 57.5060(b)**

The mining community does not control the distribution systems of alternative fuels. Presently, alternative fuel is not distributed locally. If Queenstake were to use alternative fuels, there would be an additional cost associated with transporting the fuel approximately 300 miles to our site, assuming a reliable supply of the volume needed would be available at our location. We do expect that in time, however, alternative fuels will be available locally, within 60 miles of our mines.

We don't believe that the 50 ug reduction phase in can achieve compliance with stepped-down limits. At this time it is not known when that technology will be available. The final limit should not be reduced until technology is available that will allow the mining industry to achieve compliance with reduced limits.

#### **B. Effects of Eliminating § 57.5060(c)(3)(i)**

We are in support of eliminating this provision of the DPM Rules. If this provision is left as is, mines that are just starting will not be allowed to file for an extension. In our case, if we were to develop a new mine, we would have essentially the same constraints as far as mine opening dimensions, maximum air volumes, and equipment as our existing mines have. We would not necessarily have lower DPM levels in a new mine. For this reason, it is critical that new mines be allowed the same

opportunity to qualify for extensions after taking all reasonable steps to reduce DPM emissions.

## **V. Medical Evaluation and Transfer**

We believe there are a number of ways of providing an assurance that a miner can safely wear respiratory protection if required due to exposure to excessive levels of DPM. At our mines, we provide a medical exam and certification of the ability to wear a respirator upon hire. Then annually, we provide a quantitative respirator fit test to insure that the miner is still able to obtain desired protection for contaminants. If the miners health conditions change preventing the safe use of a respirator, then additional tests can be provided including spirometry and if indicated, a medical examination. We have not had a case where a miner's health changed preventing the wearing of a respirator, that the miner was not aware of the health condition. We do not object to annual spirometry testing following guidelines developed and supervised by a medical doctor or other medical professional. We do object to the added expense of requiring a medical exam every year if there are no indicators of a medical necessity, either by the miners own request or the conditions mentioned.

## **VI. Other Regulatory Considerations**

### **Reduction Rate:**

Queenstake Resources does not believe that MSHA's proposed reduction of 50 micrograms per year is appropriate. Our experience in attempting to reduce DPM tailpipe emissions has made it abundantly clear that the technology is not available today, nor will it be available in the near future, to reduce DPM exposure by 50 micrograms per year. We recommend that MSHA leave the PEL at 400TC ug/m<sup>3</sup> until technology is proven to be available to reduce miner's exposure to 350TC ug/m<sup>3</sup>. Only then should the limit be reduced to 350TC ug/m<sup>3</sup>. The limit

should not be reduced again until technology is available to reduce miner's exposure to 300tc ug/m3. Only then should the limit be reduced to 300tc ug/m3. This method of reducing the limit only when the technology is proven available will allow operators to achieve compliance with the regulation and should continue until the final limit is met.

Forcing a lower limit than is achievable does not provide any greater protection to the affected miners than lowering the limit concurrent with improvements in feasible technology.

### **Transfer Rights:**

We support Mine Act Section 101 (a) (7), that provides for transfer rights of miners who “*may suffer material impairment of health or functional capacity by reason of exposure to the hazard covered...*” We do not believe the Act intended to require a mine operator to create a job for a miner affected by this section, nor was it intended to cause a miner to be placed in a position for which the miner has no skills or qualifications to perform the duties of the job. The very word “*reassigned*” would infer that it is to a position that is available. Further, not considering skills or qualifications could result in a miner demanding transfer into a position he is wholly unqualified or unable to perform. This could create a threat to the safety of the transferred miner, or of other miners.

Further, many of the causes that may prevent a miner from wearing a respirator are due to personal health issues such as obesity, uncontrolled

asthma, and others. Some of these conditions are largely within the control of the miner. If the miner is not following the health care recommendations of the health care provider, thus rendering himself unable to wear a respirator, the operator should not be responsible to transfer that miner while he ignores professional medical advice.